
Recognizing the Environmental Benefits of Combined Heat & Power (CHP)

Combined Heat & Power: A New York State Perspective

Albany, New York

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Recognizing the Environmental Benefits of Combined Heat & Power

- ◆ EPA's Climate Change Division
- ◆ The environmental benefits of CHP
- ◆ Opportunities to recognize those benefits
- ◆ U.S. EPA's efforts to recognize CHP
 - Initial steps
 - Ongoing activities



EPA's Climate Protection Division (CPD)

- ◆ Works through partnerships to achieve **voluntary reductions in greenhouse gas emissions**
- ◆ Flagship initiatives include
 - ENERGY STAR Label for Home and Office Appliances
 - ENERGY STAR Buildings and Homes



What Is the Nature of the Environmental Benefits of CHP?

- ◆ High efficiency
- ◆ Displacement of emissions from grid-supplied generation
- ◆ Avoidance of T & D line losses
- ◆ Natural gas-fueled (typically)
- ◆ Alleviation of transmission bottlenecks, need for new transmission capacity
- ◆ Utilization of byproduct fuels



Key Opportunities to Recognize CHP's Environmental Benefits

- ◆ Output-based approaches
- ◆ Fuel-neutral approaches
- ◆ Recognizing displacement of off-site emissions and avoidance of line losses
- ◆ Emissions trading programs



U.S. EPA: Initial Steps

- ◆ NO_x New Source Performance Standard for large utility and non-utility boilers
- ◆ Set-a-side for energy efficiency projects in NO_x model trading program under the SIP Call
- ◆ ENERGY STAR CHP Award



Revised NO_x NSPS for Large Utility and Non-Utility Boilers

- ◆ Fuel neutral
 - Same standard whether coal or gas-fueled
- ◆ Output based
 - Emission standard set per unit of gross output
- ◆ Final rule September 1998
 - Ongoing court challenge
- ◆ Precedence for future rulemakings



Energy Efficiency Set-a-Side within NO_x Model Trading Program

- ◆ EPA guidance facilitates State's allocating portion of NO_x allowances for demand side efficiency, renewable energy, and CHP projects
- ◆ New York setting a side 3% of their NO_x allowances



ENERGY STAR CHP Award

- ◆ Recognize CHP facilities reflecting leadership in helping to achieve the national goal of doubling CHP capacity by 2010
- ◆ Requires one year of operating data
- ◆ Use 10% less fuel than state-of-the-art separate heat-and-power generation



ENERGY STAR CHP Certificate of Recognition

- ◆ Projects with less than one year of operating data are eligible
- ◆ New technologies, fuel diversity, innovative designs, or significant environmental benefits



ENERGY STAR CHP Award Application Process

- ◆ Materials and questions:

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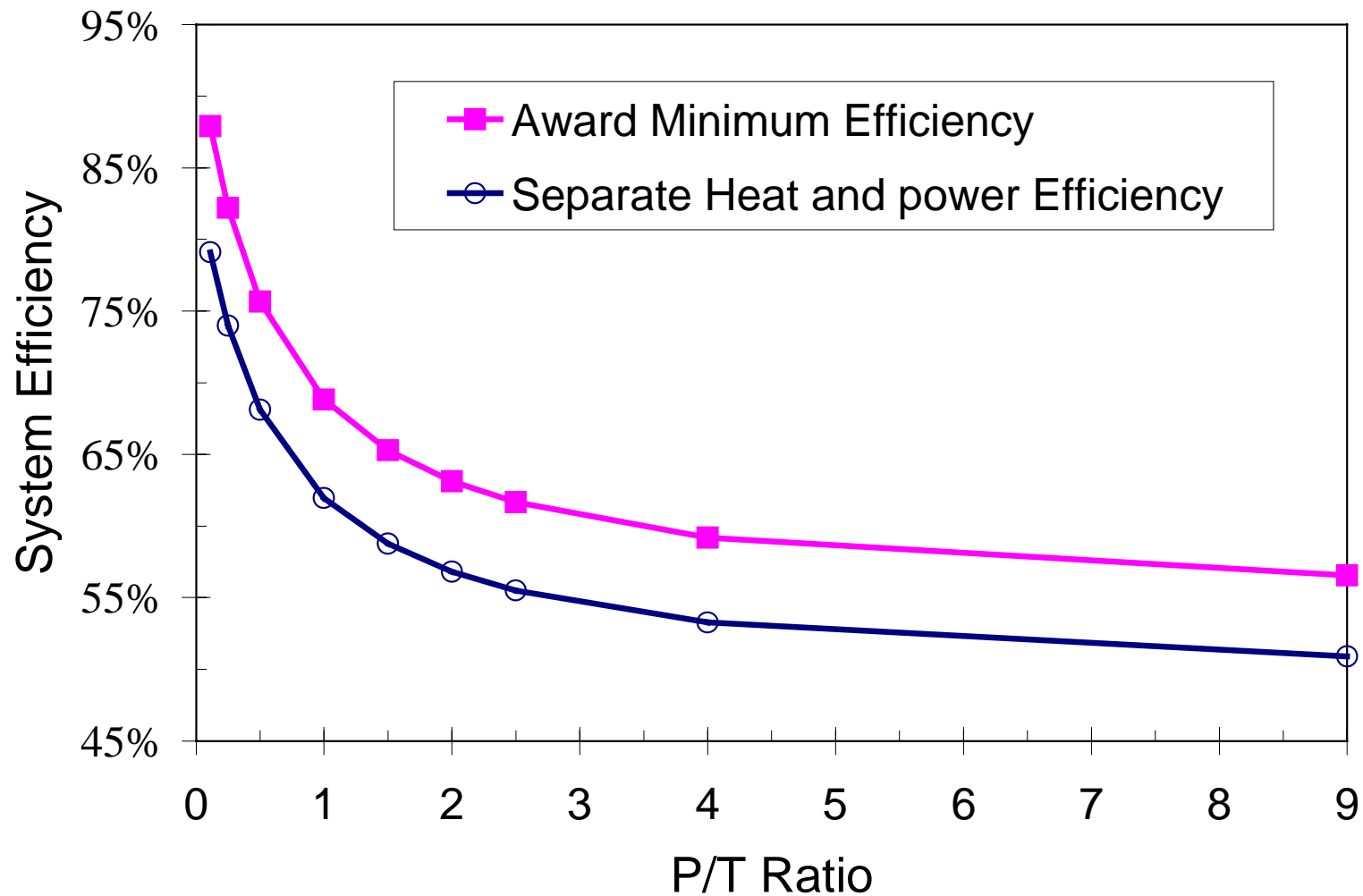
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[//www.epa.gov/cpd.html](http://www.epa.gov/cpd.html)

- ◆ Applications due February 1, 2000
- ◆ ENERGY STAR Awards Dinner
March 2000



ENERGY STAR CHP Award Efficiency Criteria



U.S. EPA: Ongoing Efforts

- ◆ Output-based allocations for the NO_x model trading program under the SIP Call
- ◆ NSR guidance and handbook for CHP
- ◆ Guidance for incorporating energy efficiency into SIPs



Output-Based Allocations under the NO_x SIP Call

- ◆ Workgroup of Clean Air, Energy and Climate Change sub-committee of Clean Air Act Advisory committee
- ◆ Broad stakeholder participation
- ◆ EPA to issue draft guidance for comment this month
- ◆ Anticipate final guidance by first quarter 2000



NSR guidance and handbook for CHP

- ◆ Handbook's purpose: to present CHP as E2 and P2 technology and consolidate prior key guidances affecting CHP into one resource
- ◆ NSR Guidance under consideration would address two CHP scenarios:
 - replacing existing boiler w/ CHP under 3rd party ownership,
 - replacing distributed boilers w/ CHP-supplied district energy system



For More Information

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